

Attachment 1
EPA Response to Non-Directed Comment Resolution Tables
December 8, 2010

EPA Direction on key issues where LWG did not agree to incorporate comments

RI Comment - Linking Sources to In-Water Contamination: EPA comments G-6 and G-9 requested that the LWG evaluate the magnitude of upland contamination associated with various migration pathways to help understand the linkage between upland and in-water contamination. This information would be primarily presented in a revised CSM (Section 10 of the RI Report). This information is required by Section 7.4 of the Statement of Work (SOW) which states that the “Respondents will identify source areas that are contributing to contamination to the in-water portion of the Site”. This information is further required based on Section 6.2 of the April 2004 Programmatic Work Plan which states that the “RI will not be considered complete until potential sources have been identified” and that “Prior to development of remedial goals and strategies, an evaluation of potential sources of chemicals driving unacceptable risks will be conducted.”

EPA first raised the need an evaluation of upland sources of contamination during our review of the February 2007 Comprehensive Round 2 Site Characterization Summary and Data Gaps Report (Round 2 Report). As documented in a March 9, 2009 email between Eric Blischke and Keith Pine, EPA proposed the following resolution: “The assessment should include not only an assessment of whether the pathway is complete but also the magnitude of the contamination associated with the migration pathway. This information should be presented in a semi-quantitative fashion for each chemical evaluated in the CSM in order to better understand the relationship between upland sources of contamination and the in-water distribution of contamination. A more detailed, quantitative evaluation, will be required for the feasibility study.” As documented in the same email, EPA “agreed that a strict screening step was not necessary. However, EPA's position is that some assessment of the likelihood of a given contaminant migration pathway impacting the river is required.”

In order to address comments G-6 and G-9, EPA requires additional information in Section 10 of the revised RI report that considers the magnitude of current and historical upland sources as they relate to the distribution of in-water contamination. EPA has developed a CSM outline (Appendix A) that summarizes the information that should be presented in the revised CSM. This outline is based on the site-wide CSM for PCBs presented in Section 11.2 of the Round 2 Report. EPA would like to clarify the evaluation of upland sources is not a nature and extent of contamination evaluation but rather of sufficient detail to support the CSM and meet the objectives specified in the programmatic work plan. EPA directs the LWG to prepare a revised CSM consistent with the attached outline for all 13 indicator chemicals presented in Section 10 of the draft RI report.

RI Comment - Data Lockdown Date: EPA commented that the LWG "Expand the data set for the RI to include data collected subsequent to June 2008." EPA believes that this information is relevant to characterizing the Portland Harbor site. On November 1, 2010, the LWG developed a proposal for addressing the comment that included updating the RI data base but did not agree to update certain maps and figures in the RI Report. EPA believes that the recently collected data such as sediment data collected in the vicinity of the International Slip and RM 11E are directly relevant to the RI from the standpoint of the nature and extent of contamination and sediment data collected from the Downtown Reach are directly relevant to the RI from the standpoint of site boundary determination, the recontamination evaluation and the CSM. In addition, it is important that the RI Report be as up to date as reasonably possible since it represents a comprehensive summary of site conditions that will be referred to for many years in the future. Finally, the previously established data lockdown date of June 2008, which was set as the cutoff date so the LWG could proceed with preparation of the draft RI report and risk assessment reports, will be approximately 3 years old by the time a final RI report is received. In order to address this comment, EPA directs the LWG to make the following changes to the revised RI Report and Site Data Base:

1. The data lockdown date for the RI should be changed from June 2008 to the date of EPA comments on the draft RI and baseline risk assessment reports (July 19, 2010). Data sets that must be incorporated into the RI data base and RI report include: Data collected in the downtown reach, the data collected offshore of RM 11E, the U.S. Moorings data, the data associated with the BP-Arco post-source control in-water data, data collected by Northwest Pipe and Casing in the vicinity of the International Slip and the Post Office Bar data. In addition to the above data sets, the LWG should make reasonable efforts to identify any significant new data sets relevant to the RI since the June 2008 cut off within two weeks following the date of this letter. EPA will then finalize the RI data set.
2. The data lockdown date for the risk assessments will remain unchanged (i.e., June 2008) with the following exceptions: A) The recent PBDE fish tissue data shall be presented in the RI and used to evaluate risks to human health in accordance with all fish consumption exposure scenarios. The recently issued reference dose values available on EPA's Instigated Risk Information System (IRIS) data bases should be used for the risk estimates. The risk assessment information for PBDE's may be presented as an addendum. B) The recent Osprey egg data should be used to validate the bird egg uptake model as previously agreed to by the LWG.
3. The LWG shall develop and provide to EPA and updated electronic project data base as soon as practicable.
4. Text shall be added to the appropriate paragraphs of Sections 5 and 10 of the revised RI summarizing the new data (including downtown reach data) in a manner consistent with revised RI Report.
5. A new set of RM 11-12 maps shall be developed and presented for all indicator chemicals due to the significance of the RM 11E data set. In addition a new series of maps that depict indicator chemicals in the downtown reach for surface sediments shall be included as part of Section 5 of the RI Report.

6. Tables 5.6-3 through 5.6-6 and Table 5.6-13 shall be updated to reflect the updated data sets. Table 5.6-13 in particular is directly relevant to the downtown reach data and should be updated to reflect the substantial amount of downtown reach data to support the CSM discussion presented in Section 10 and elsewhere.
7. New text shall be added to Section 10, CSM, that refers to the post-data lockdown data discussed in Section 5.6 (i.e., downtown sediment data collected by the City). The new text in Section 10 should evaluate whether the additional upstream data is sufficient to support establishment of an upstream site boundary.

BHHRA Comment - Inclusion of the PBDE Fish Tissue Data in the BHHRA: This comment was provided to the LWG as part of our data lockdown comment with respect to the RI Report (see above). EPA disagrees that the PBDE analysis was solely for the purpose of method development. EPA has determined that the PBDE data is sufficient to assess risk within Portland Harbor, support regional watershed efforts and monitor the effectiveness of the site remedy with respect to PBDEs. As a result, EPA directs the LWG to present the risks associated with PBDEs in bass, carp and clam tissue consistent with the fish consumption scenarios developed in the Portland Harbor baseline human health risk assessment. This comment shall not change the agreed upon PRGs to be used in the draft FS. EPA reserves the right to require the development of PRGs for PBDEs in the future (e.g., proposed plan and/or final FS) if deemed necessary.

EPA clarifications on other key issues

RI Comment - Background Statistical Outliers: EPA previously directed the LWG to exclude statistical outliers that were geographically clustered from the background data set. However, EPA did allow the LWG to present background statistics with the outliers retained in the data set. Although the resolution states that EPA agrees with the response, it was agreed during our discussions with the LWG that some revisions for clarity will be made. This is not reflected in the LWG response. EPA would like to note for the record that the LWG agreed to make some revisions for clarity.

BERA Comment - Assessing Risk at the Individual Sample Scale: EPA specific comment 122 states in part: "Present individual composite risk, not using a 95% UCL concentration." In the response to comments, the LWG agrees to present location specific TRV exceedances for individual samples but also states that the limited spatial extent and/or low magnitude of the HQ exceedance are not necessarily ecologically significant. However the resolution is not clear that a composite by composite evaluation of tissue TRV exceedances will be performed consistent with the Problem Formulation. EPA expects a composite by composite comparison as required by the Problem Formulation. In addition, the risk assessment shall evaluate surface water data on a point by point basis for small home range receptors. The LWG may present information related to ecological significance in the risk characterization section of the BERA.

BERA Comment - Use of BSAFs/BSARs in shorebird calculations: The LWG did not include BSARs to estimate dietary concentrations for the evaluation of shorebirds. LWG representatives have stated that this was not done because the r squared values are below

0.3. However, it is unclear whether BSARs were developed for chemicals that were also modeled using the mechanistic food web model. Consistent with Table 6 of the Problem Formulation document, prey concentrations should be predicted based on lab and worm BSAF/BSARs where prey data are not available at individual beaches. Chemicals for which BSAF/BSARs shall be used are summarized below:

- Benzo(a)pyrene
- Total PCBs
- PCB TEQ (birds)
- Dioxin TEQ (birds)
- Total TEQ
- Aldrin
- Sum DDE
- Total DDX

The LWG should develop BSARs/BSAFs for the above chemicals for use in the dietary evaluation of shorebirds consistent with the problem formulation. BSARs/BSAFs are not required for chemicals that do not pose a risk to shorebirds nor for chemicals for which the r squared value is below 0.3.

BERA Comment - Include HQs in Summary Tables: EPA commented that HQs should be presented (rather than an "X") in the risk assessment summary tables. The LWG countered that this was a complex endeavor. In order to resolve the comment, EPA provided example tables to the LWG. In the LWG's proposed resolution, the LWG states that "EPA agreed that it is acceptable to present tables summarizing the chemicals with HQs greater than 1.0 using X's (e.g., Tables 7-39, 11-1), so long as subsequent tables summarizing the risks for a receptor group (e.g., Table 7-40) or multiple receptor groups (e.g., Table 11-2) provide sufficient information to characterize the magnitude, extent, and ecological significance of risks. EPA also agreed that HQs are not required for tables showing the results of screening calculations." To the extent practicable, HQ's must be presented consistent with the example tables provided to the LWG.

Appendix A – CSM Outline

In order to provide the necessary information in Section 10 to address comments G6 and G9, EPA requires an updated CSM that includes an evaluation of the magnitude of upland contamination and contaminant migration pathways. The updated CSM shall be presented according to the following outline which is based on the information presented in Section 11 of the Round 2 Report. The evaluation of upland sources should not be considered a nature and extent of contamination evaluation but rather of sufficient detail to support development of a comprehensive CSM that considers contaminant sources, migration pathways and exposure media. EPA requires this outline to be followed for all 13 indicator chemicals presented in Section 10 of the draft RI report.

1. Chemical Distribution – describe chemical distribution for the media listed below:
 - a. Sediment
 - b. Surface Water
 - c. TZW
 - d. Biota
2. Potential Sources – discuss potential sources both from a broad usage perspective and a pathway specific basis.
 - a. Usage of chemical – historical and current: Describe what is known about the use of the chemical on a industry sector basis. Describe the types of industries that existed in Portland Harbor that are known to have handled, manufactured or disposed of the chemical
 - b. Stormwater/Overland Transport: Described those facilities, stormwater basins or land use types where the chemical is known to be present in stormwater at significant levels. Cite factual information such as chemical concentrations, stormwater loading data and/or priority of source based on DEQ source control information.
 - c. Wastewater: Describe those facilities where the chemical is known to be associated with wastewater discharges. Cite factual information to the extent possible to support the association of the chemical with the wastewater discharge (e.g., permit violations, documented spills or other documented information from DEQ files).
 - d. Overwater Discharge: Cite factual information to the extent possible to support the association of the chemical with the overwater discharges (e.g., documented spills).
 - e. Groundwater Discharge: Describe sites where groundwater plumes associated with the chemical are present. Present factual information such as chemical concentration in near shore groundwater wells and DEQ ranking of priority.
 - f. Riverbank Erosion: Describe sites where the chemical has been detected in riverbank soils.
 - g. Atmospheric Deposition: Describe what is known about atmospheric deposition. Cite data to the extent available
 - h. Upriver (Watershed) Sources: Describe what is known about upriver (watershed) sources. Cite data including data from the downtown reach, upriver reach, and other data generated by DEQ, USGS and others.

3. Relationship of sources to distribution of chemical: Describe how the source information (including upriver/watershed sources) accounts for the distribution of contamination at the site. Focus on sediment distribution but also describe surface water, biota and transition zone water data. Discuss sources from the perspective of current and historical sources. Describe status of DEQ source control efforts (including watershed wide and downtown reach) to control current sources.